AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

17. (Currently Amended) A method for reducing the number of feeders between a radio base station and a receiver diversity antenna arrangement that comprises at least two ~~spaced apart~~ antennas that are spaced apart and/or that have different polarizations, each antenna being adapted for reception of ~~individual RF signals~~a radio frequency (RF) signal transmitted from the same transmitter, ~~said RF signals~~ where each RF signal received at each of the spaced apart antennas is ~~all being~~ at the same frequency and carries the same information, said method comprising the steps of:

converting one or more received antenna signals into a corresponding number of ~~intermediate~~ different frequency ~~(IF)~~ signals by mixing with a first set of a corresponding number of reference signals; ~~and,~~

forwarding the diversity signals received on all the antennas of the receiver diversity antenna arrangement, of which one or more have been frequency converted to the base station on a single feeder; and

diversity processing two or more of the forwarded diversity signals to obtain a single enhanced received signal corresponding to the transmitted signal.

18. (Currently Amended) The method recited in claim 17, wherein the diversity antenna arrangement comprises n antennas, said method comprising the steps of:

converting all received antenna signals except one, and

forwarding the non-converted antenna signal together with all frequency-converted ~~IF~~ signals to the radio base station on the single feeder, thus providing n-way diversity with a single feeder.

19. (Previously Presented) The method recited in claim 17, wherein the diversity antenna arrangement comprises n antennas, said method comprising the step of converting all received antenna signals and forwarding them to the radio base station on the single feeder, thus providing n-way diversity with a single feeder.

20. (Currently Amended) The method recited in claim 17, ~~characterized by~~ further comprising: converting the ~~IF~~ frequency-converted signals to ~~second IF~~ other frequencies by mixing them with a second set of reference signals in order to obtain ~~a second~~ another set of ~~IF~~ frequency-converted signals which are forwarded to the base station on the single feeder.

21. (Currently Amended) The method recited in claim 17, wherein the diversity antenna arrangement comprises a first and a second antenna, said method comprising the steps of:

converting the antenna signal on the second antenna into an intermediate (IF) signal, and

forwarding the IF signal together with the non-converted antenna signal on the first antenna to the radio base station on a single feeder, thus providing 2-way diversity with a single feeder.

22. (Currently Amended) The method recited in claim 17, wherein there are two diversity antenna arrangements, one comprising a first and a second antenna, the other comprising a third and fourth antenna, said method comprising the steps of:

converting the RF signals from the second and fourth antennas into first and second intermediate frequency (IF) signals, both of the same intermediate frequency;

forwarding the non-converted antenna signal on the first antenna together with the first IF signal on a first feeder to the base station; and~~,~~

forwarding the non-converted antenna signal on the third antenna together with the second IF signal on a second feeder to the base station, thus providing 4-way diversity with two feeders.

23. (Currently Amended) The method recited in 17, further comprising the steps of:

converting, at the radio base station, the ~~IF~~ frequency-converted signals into other ~~IF~~ frequency-converted signals, all on the same intermediate frequency, by mixing them with a set of reference signals, and

subjecting the twice frequency converted signals on the common intermediate frequency to the diversity signal processing.

24. (Currently Amended) A receiver diversity antenna arrangement, comprising:

at least two diversity antennas that are spaced apart and/or that have different polarizations, each ~~adapted~~ antenna being dapted for reception of ~~individual~~ radio frequency (RF) ~~signals~~signal transmitted from the same transmitter, where each ~~, said~~ RF ~~signals~~ signal is at ~~all being of~~ the same frequency and carries the same information;

one or more frequency converters each adapted to convert a respective antenna signal to a respective ~~intermediate~~ different frequency signal ~~(IF)~~ by mixing it with a predetermined frequency;

a combiner for combining the signals received on ~~all~~ the antennas, of which signals one or more have been frequency converted, to form a composite signal which is forwarded to a radio base station on a single feeder; and

a diversity processor for diversity processing two or more of the forwarded diversity signals to obtain a single enhanced received signal corresponding to the transmitted signal.

25. (Currently Amended) The receiver diversity antenna arrangement recited in claim 24, wherein a signal from a diversity antenna follows a diversity branch, the receiver diversity antenna arrangement further comprising~~characterized by~~ providing a frequency converter in each diversity branch except one.

26. (Currently Amended) The receiver diversity antenna arrangement recited in claim 24, wherein a signal from a diversity antenna follows a diversity branch, receiver diversity antenna arrangement further comprising ~~characterized by~~ providing a frequency converter in each diversity branch.

27. (Currently Amended) The receiver diversity antenna arrangement recited in claim ~~23~~24, wherein a second set of frequency converters are adapted to convert the ~~first set of IF~~frequency-converted signals into ~~a second~~ another set of ~~IF~~ frequency-converted signals for transport to the radio base station on the single feeder.

28. (Currently Amended) The receiver diversity antenna arrangement recited in claim ~~23~~24, wherein there are two diversity antennas, one of which is connected to a first duplex filter so as to provide for reception and transmitting, receiver diversity antenna arrangement further comprising ~~characterized by~~:

a single frequency converter converting the antenna signal from the second antenna to an intermediate frequency to form an IF signal,

wherein the combiner is configured to combine~~combining~~ the original RX signal from the first antenna with the IF signal into a composite signal, and ~~a~~ the single feeder is configured to forward~~forwarding~~ the composite signal to the base station, thus providing 2-way diversity with one feeder.

29. (Currently Amended) The receiver diversity antenna arrangement recited in claim ~~25~~24, further comprising:

a duplicate diversity antenna arrangement to provide a composite diversity antenna arrangement comprising four antennas and two feeders, each antenna arrangement comprising a respective single feeder, thus providing 4-way diversity with two feeders.

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31. (Currently Amended) A radio base station~~,~~ comprising a receiver diversity antenna arrangement according to claim 24~~: a transceiver with a plurality of frequency converters adapted to provide frequency translated signals, called diversity signals, all at the same frequency; and, means for signal processing the diversity signals in order to obtain an enhanced~~

~~signal, comprising means connected to the input of the transceiver to receive from one single feeder at least one intermediate frequency signal (IF) together with either a non-frequency translated antenna signal and/or other frequency converted IF signals, and to supply said latter signals to respective ones of said frequency converters so as to provide said diversity signals~~.

32. (Currently Amended) A site comprising a radio base station (RBS)~~,~~ coupled to at least one tower-mounted unit (TMA) via a single feeder and including a receiver diversity antenna arrangement according to claim 24~~with filters and RF amplifiers, at least two antennas for providing diversity, the signals received by the antennas being RF signals which all are of the same frequency characterized by at least one frequency converter provided in the TMA and connected to one of the diversity antennas in order to convert the antenna's RF signal into an IF signal at a non-used frequency, and a combiner combining the IF signal with either a non-converted RF antenna signal and/or other converted IF signals into a composite signal which is applied to a single feeder extending between the TMA and the RBS~~.

33. (New) The method in claim 17, wherein the two antennas are spaced apart and each of the two spaced apart antennas has a different polarization.

34. (New) The receiver diversity antenna arrangement in claim 24, wherein the two antennas are spaced apart and each of the two spaced apart antennas has a different polarization.